

Antimicrobial activity of different extracts of five plants

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INTRODUCTION

Since many years, several plants have been used in order to control microbial infections. In this study was designed to screen aqueous, methanol and chloroform extracts of *Eryngium comosum*,^{1,2} *Commelina caelestis*,² *Salpianthus arenarius*, *Schefflera octophylla*³ and *Drymaria glandulosa*⁴

teus vulgaris, (III) *Escherichia coli*, (IV) *Sarcina lutea*. The micro-organisms were cultured for 24 h at 37 °C in BHI.

Each culture was diluted with sterile 0.9% saline solution to give a suspension of about 10⁷ microorganisms per ml. An amount of 0.1 ml of this suspension was spread on the test plate and 2.5 mg of each extract were placed on a blank disc.⁵

DISCUSSION

Of the 5 plants sample tested, only the methanol and aqueous extracts of *S. octophylla*, showed activity against Gram positive (*S. aureus* and *S. lutea*) and the chloroform, methanol and aqueous extracts of *E. comosum* against *S. aureus*. None of the extracts of *C. caelestis*, *S. arenarius* or *D. glandulosa* showed any activity against the microorganisms at concentration used. Any extracts of the plants tested had antimicrobial activity against Gram-negative. Plants showing antimicrobial activity in this screening will further be examined for their active ingredients.

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Antibacterial properties of cajuput oil

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ABSTRACT

(The paper was presented by Vladimír Ery)

Cajuput oil is obtained by hydrodistillation of leaves from the trees *Melaleuca cajuputi* Powell, syn. *Melaleuca minor* Sm. (family *Myrtaceae*). The current production of cajuput oil in Vietnam exceed 100 tons per year and is mostly destined for the home market. Cajuput oil have been used for longer by traditional healers in Vietnam, Indonesia and China for treatment of purulent skin lesions and as an inhalent in the treatment of nasal catarrh with satisfactory results. The isolation of 1,8-cineole, *l*-*l*-linalool, *l*-*l*-*l*-terpineol and *l*-*l*-terpinen-4-ol was performed by column chromatography of the most suitable distillation fractions on silica gel (destinated with

carried out on 23 *Staphylococcus aureus* strains, 1-B-cineole proved to be most potent compound, with average inhibition zones amounting to 16 mm, the other three substances appeared also affective. In the eleven strains of *E. coli* inhibition zone was found 15-16 mm in diameter. *Pseudomonas aeruginosa* strains showed variable levels of inhibition. The most effective out of 4 above mentioned fractions were terpinen-4-ol and -terpineol. Satisfactory results were found in testing of the strains of *Candida albicans*, *Streptococcus* spp. A, B, C and G, *Enterobacter* spp., *Salmonella* spp. and *Klebsiella pneumoniae*. According to our experience we can conclude, that the use of cajuput oil fractions for external treatment of purulent lesions is promising.